



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

# Memorandum

Subject: **INFORMATION:** Qualification Standards for Nondestructive Testing (NDT) Inspection/Evaluation Personnel Date: 4/26/05

From: Manager, Production and Airworthiness Certification Division, AIR-200 Reply to Attn. of:  
Manager, Aircraft Maintenance Division, AFS-300

To: All Manufacturing Inspection Offices  
District/Satellite Offices  
All Flight Standards District Offices

Questions have been raised by FAA Aviation Safety Manufacturing and Airworthiness Inspectors on how to determine if qualified personnel are performing Non Destructive Testing (NDT). Currently, there is no national policy to determine if personnel performing NDT are qualified. In conjunction with AIR-200, AFS-300 and the Chief Scientific and Technical Advisor for Non Destructive Evaluation, guidance has been developed to assist FAA inspectors in assuring that only qualified inspectors perform NDT. This memorandum can be used to establish if personnel performing NDT inspections are qualified.

In the United States there is no national central certification requirement or standard for aviation NDT personnel to assure that they are qualified to perform NDT. Military Standards and certain professional society and association standards have been and are considered acceptable to the FAA. There are several current national and international standards acceptable to the FAA that may be used to assure that only qualified personnel perform NDT. For example:

MIL-STD-410E, Military Standard. Nondestructive Testing Personnel Qualification and Certification. This document has been rescinded by the Department of Defense, but is still considered acceptable to the FAA.

ATA Specification 105, Air Transport Association, Guidelines for Training and Qualifying Personnel in Nondestructive Testing Methods.

AIA-NAS-410, Aerospace Industries Association, National Aerospace Standard, NAS Certification & Qualification of Nondestructive Test Personnel. This document has superceded MIL-STD-410E.

Internationally, standards generated by other regulatory agencies and national certification programs have been and are considered acceptable to the FAA. For example, individuals considered NDT qualified under ISO 9712, “Non-Destructive Testing - Qualification and Certification of Personnel” or JAA JAR-66, “Certifying Staff Maintenance” are considered acceptable to the FAA.

The following guidance discusses the generic elements of the standards considered acceptable to the FAA and can be utilized as a guideline for the basic requirements to assure that only qualified individuals perform NDT inspections. Any organization developing its own procedures to assure that only qualified personnel perform NDT, should minimally address the generic elements.

**1. Vision Examinations:** NDT personnel should receive documented vision and color blindness testing at reasonable intervals (one to two years, shorter preferred). The NDT inspector shall have documented evidence of satisfactory vision in accordance with accepted medical standards to be considered a qualified NDT inspector. Vision examinations can either precede or accompany the initial determination of qualification to perform NDT. Vision examinations shall be administered by personnel in accordance with the standard to determine qualification.

Near Distance Vision Requirements:

The NDT inspector shall have natural or corrected near distance acuity in at least one eye capable of reading the Jaeger Number 1 Test Chart or equivalent at a distance of not less than 30 cm (12 in.).

(b) Color Vision Requirements:

The NDT inspector shall be able to differentiate among colors used in the NDT method(s) for which the inspector is qualified.

(c) Vision Examination Documentation Requirements:

Following initial qualification, the documented near distance and color vision examinations shall be administered as required above, and records thereof retained by the employer.

**2. Levels of Qualification:** NDT personnel can be categorized at different levels of competence. (e.g. Trainee, Limited, Level 1, 2, 3,). They can also be categorized for different functional areas, such as inspector, trainer, or auditor. NDT personnel should perform only at the level(s) or function(s) to which they have been qualified.

**3. Training:** Inspection personnel should receive documented initial and recurrent training in the standards, methods, and levels they utilize. This should be a mix of classroom, practical, and on-the-job training. The frequency and content of recurrent training will be specified by the standard under which the NDT inspector has been qualified.

**4. Testing:** NDT personnel should demonstrate documented proficiency, both in classroom knowledge and practical application of test method(s). NDT personnel shall have a combination of education, training, and experience as determined by the specific standard under which they are determined qualified. NDT inspectors must understand the principles and procedures of applicable NDT methods. Personal information including education, training, and experience must be documented and validated against the standard under which the NDT inspector is considered qualified.

**5. Experience:** NDT personnel require experience in a test method to be considered qualified to perform that test method. Recent (within the last 6-12 months, shorter period preferred) utilization of the inspection method being performed is necessary in order to maintain a qualified NDT inspector status. Inspectors not meeting this recent experience level would need to be re-qualified.

**6. Disqualification:** A procedure needs to be in place to allow an organization to disqualify a NDT individual from performing inspections when the inspector doesn't meet current standards.

**7. Documentation:** Sufficient documentation must be available and retained to demonstrate that only qualified personnel are engaged in the NDT process: Records shall be maintained for each qualified individual, and for each individual who has been disqualified to perform NDT: Records shall include all education, experience, vision examination, and training documentation.

If there are any questions, please contact a member of the Production and Airworthiness Division at (202) 267-8361.

/s/

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/s/

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**NOTHING FOLLOWS**